State Strategies to Incorporate Oral Health into Medicaid Payment and Delivery Models for Chronic or High-Cost Medical Conditions
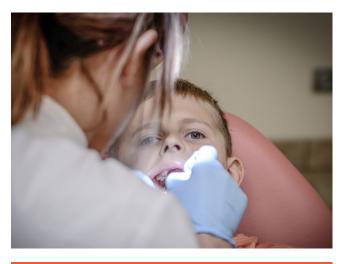
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Introduction

Many state policymakers know oral health is an essential component of overall health and well-being.[1] Studies show that poor oral health can compromise quality of life, self-esteem, and even the ability to obtain and hold a job,[2] and it is difficult for many lower-income people to receive the preventive and restorative oral health services they need. State Medicaid programs are challenged by increasing costs and growing demands for care as they work to respond to needs while balancing their budgets. States are not required to offer Medicaid dental benefits to adults, and currently 17 states offer emergency-only or no dental benefits at all to adult beneficiaries.[3] Even in states that provide adult Medicaid dental benefits, many enrollees struggle to find a dentist as fewer than four in ten dentists nationwide accept Medicaid.[4]

At the same time that state health policymakers struggle to provide vulnerable populations with access to oral health services, they also grapple with the high financial — and human — costs of chronic disease. Eighty-six cents of every health care dollar in 2010 was spent on people with one or more chronic conditions,[5] and chronic medical conditions are projected to cost the United States $794 billion per year in lost productivity.[6] Those high chronic care costs impact state Medicaid budgets, as Medicaid beneficiaries experience chronic illness at greater rates than their privately insured counterparts.[7]

There is evidence of a connection between oral health and some chronic conditions, such as lung disease, kidney disease, and diabetes. However, not all people living with or at risk of chronic disease receive the oral health care they need — only 36 percent of older adults with diabetes had preventive dental care in 2011.[8] Lack of oral health care for vulnerable populations can lead to physical consequences. For example, 42 percent of low-income adults reported difficulty biting and chewing due to mouth and teeth[9]

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conditions, which could compromise their ability to control or prevent chronic conditions through a healthy diet. Some state agencies are considering ways to improve health and possibly save money by incorporating oral health into their Medicaid payment and delivery models for chronic or high-cost beneficiaries.

Strategies to Incorporate Oral Health into Medicaid Payment and Care Delivery Models for Chronic Medical Conditions

With support from the DentaQuest Foundation, the National Academy for State Health Policy (NASHP) explored the ways state Medicaid programs could incorporate oral health into care delivery or alternative payment models for chronic or high-cost medical conditions for which there is evidence of correlation with oral health. In early 2018, NASHP interviewed key Medicaid officials from a politically and geographically diverse group of six states with Medicaid health homes or alternative payment models. NASHP staff researched five states (**Alabama, Missouri, Rhode Island, South Dakota, Washington State**) that have Medicaid health homes with memberships ranging from 2,000 to 200,000, and one state with a dental episode of care (**Ohio**). NASHP officials also interviewed thought leaders and a variety of stakeholders from these and other states to inform this report.

This brief examines existing and potential state Medicaid efforts to incorporate oral health into payment and care delivery models for adults and children with high-cost or chronic conditions to help improve overall health and address rising costs. It also identifies key policy questions and considerations, barriers, and opportunities to incorporate oral health into payment or care delivery initiatives for chronic or high-cost medical conditions.[10] It highlights policy levers and possible strategies that states could use to improve the oral health of those with chronic or high-cost medical conditions.

State leaders identified some concrete first steps to incorporate oral health into Medicaid health homes or other models of care for chronic conditions. Interviewees suggested feasible early strategies that could be helpful for states with a wide range of Medicaid dental benefits. See "Starting Strategies for States."

Starting Strategies for States

- Compile dental data for health home members and share with providers
- Include oral health questions in health home screens or assessments.
- Include dental providers in value-based payment initiatives.
- Connect health home members to a range of dental providers by:
  - Adding dental providers to the community resource lists provided to patients and health home coordinators, and/or
  - Employing community health workers to provide oral health education to patients, connect members to dental providers, and help with appointment adherence.
- Train health home coordinators about dental benefits, self-management, and referrals for members.
- Leverage dental managed care contracts to encourage or require care coordination.
- Use national or state dental measures to assess progress.

Background

States are increasingly operating innovative payment and health care delivery models that promote higher quality and better-coordinated services. For example, some states are developing episodes of care in which providers receive a bundled payment for efficiently providing a set of high-quality services, as opposed to traditional fee-for-service arrangements that pay providers for the volume of services they provide.[11] Another important model is the Medicaid health home described in Section 1945 of the Social Security Act.

At least 27 states use Medicaid health homes or episodes of care to improve care coordination and overall care for adult and child Medicaid beneficiaries with multiple costly and debilitating chronic conditions.[12] Their widespread adoption and robust infrastructure makes the two approaches viable vehicles for oral health interventions.[13]

Health homes also target some of the physical and behavioral health conditions for which there is a correlation with oral heath, such as diabetes and substance use disorder. Some health homes consider tobacco use — also related to oral health[14] — to be a risk factor for developing chronic conditions. The most prevalent conditions for health home participants in states studied include diabetes (**MO, WA**), heart disease (**AL, MO**), hypertension (**MO, SD, WA**), lower back disorders (**SD**), mental health conditions and/or substance use disorders (**AL, MO, SD, WA**), obesity (**MO**), and renal diagnoses (**WA**). Prevalent conditions for children include asthma (**AL, MO**), developmental disability (**MO**), mental health (**AL**), and obesity (**AL**).

Under the Medicaid health homes model, states may amend their Medicaid state plans to improve patient care and population health, as well as reduce per capita costs by coordinating care for individuals who suffer from chronic physical conditions or serious and persistent mental illness.[15] According to 2010 guidance to state Medicaid directors, the Centers for Medicare & Medicaid Services (CMS) expects states operating health homes to use a whole-person approach or philosophy that integrates primary care and behavioral health, and links beneficiaries to community, family, and social services.[16]

Many state officials recognize oral health as an important component of this whole-person philosophy of health. Tooth decay, gum disease, and missing teeth can affect one's ability to chew healthy foods, which may in turn affect overall health and well-being.[17] Indeed, research shows that oral health is connected to chronic disease, maternal and child health, substance use, and quality of life.[18] During the course of NASHP's interviews, state policymakers reinforced this important connection. One state official noted, "Any time we have better oral health, the physical health outcomes are…improved." Another official shared emphatically, "When you leave out the mouth, you leave out a way to address overall health." Improved oral health may also yield dividends in state health system savings. In 2012, dental-related emergency department visits cost the US health care system $1.6 billion.[19] Moreover, the American Dental Association Health Policy Institute provided additional evidence for potential cost savings for states by prioritizing oral health, estimating that Maryland alone could save $4 million a year by instituting a statewide dental emergency department diversion program.[20]

Medicaid dental care benefits and delivery systems vary by state. While Medicaid covers pediatric dental services as part of the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit, and pediatric dental services are included in the essential health benefit package under the Affordable Care Act, not all states offer adult dental coverage under Medicaid.[21] Currently, 34 states have a Medicaid adult dental benefit that covers more than emergency services.[22] Roughly 18 states and Washington, DC, include dental services in overall Medicaid managed care contracts, while others use a fee-for-service model or a separate dental managed care vendor for dental services.[23]

Access to dental providers is a challenge nationwide, although the scope of the challenge varies by state. Every state has at least 10 dental health professional shortage areas. Thirty-two states would need to attract more than 100 additional dental practitioners to remove their shortage area designations, and three states would need to attract more than 500 providers.[24] Some states work to address such shortages with dental therapists, expanded-function dental hygienists or other mid-level providers. Variations in access, benefits, and delivery systems affect the policy tools available to state policymakers; however, similar opportunities exist to integrate oral health into health homes or other care delivery models for chronic or high-cost medical conditions.

This table highlights the focus, size, and target populations of the state health homes studied and identifies whether the state Medicaid program covers dental services for adults as of July 2018.

Table 1. Selected Medicaid Health Home Models

Section 1945 of the Social Security Act allows states to establish health homes for Medicaid beneficiaries who have: two or more chronic conditions; one chronic condition and are at risk for another one; or one serious and persistent mental health condition.

State	Health Home Focus[25]	Target Condition(s)[26]	Target Population(s)[27]	Enrollment (as of Dec. 2016)[28]	Adult Dental Benefit? [29]
Alabama	Chronic conditions and serious and persistent mental illness (SPMI)	Mental health conditions, substance use disorder (SUD), asthma, diabetes, heart disease, body mass index (BMI) over 25, cancer, cardiovascular disease, chronic obstructive pulmonary disease (COPD), hepatitis C, HIV, sickle cell disease, and transplants	Children, adolescents, adults	217,750	No
Missouri	Community Mental Health Center – Health Homes	A mental health condition or SUD, asthma, COPD, diabetes, heart disease, cancer, BMI over 25, developmental disability. Tobacco use and diabetes are "at risk" behaviors for certain chronic conditions.	Children, youth, adults	25,787	Yes. Expanded in 2016
	Primary Care Health Home — Emphasizes integration of behavioral health and primary care.[30]	A mental health condition or substance use disorder (including depression and anxiety), asthma/COPD, diabetes heart disease, BMI over 25, developmental disability. Tobacco use, diabetes, obesity, and pediatric asthma are "at risk" behaviors for certain chronic conditions.	Children, adults	20,092	
Rhode Island	Children and youth with special health care needs (CYSHCN) with chronic conditions	Serious mental illness or serious emotional disorder, SUD, asthma, diabetes, intellectual or developmental disability, Down syndrome, mental retardation, seizure disorders	CYSHCN and their families.	1,576	Full
	Community mental health	SPMI or serious mental illness	Adults and adolescents	8,247	
	Opioid dependence	Those with SUD – opioid dependence, plus one or more chronic conditions, or one chronic condition and at risk of developing another	Adults	2,937	
South Dakota	Two or more chronic conditions, one and at risk for another, or a single SPMI or serious emotional disability.	Mental health conditions, SUD, COPD, hypertension, musculoskeletal, and neck and back disorders are included as chronic conditions. Risk factors for developing chronic conditions include pre-diabetes, tobacco use, cancer, high cholesterol, depression, and use of multiple medications (six or more classes of drugs)	Adults, children	6,027	Limited
Washington	Chronic conditions	Mental health/SUD, asthma, diabetes, heart disease, cancer, cerebrovascular disease, coronary artery disease, dementia or Alzheimer's, intellectual disability or disease, hematological and musculoskeletal conditions, HIV/AIDS, renal failure, chronic respiratory conditions, neurological disease, gastrointestinal disease.	Adults, children	77,511	Full

Key Policy Options and Considerations for Incorporating Oral Health into Medicaid Health Homes or Alternative Payment Models

States use existing policy tools, data sources, and partnerships to incorporate oral health into Medicaid health homes or alternative payment models. While Medicaid health homes focus on a range of populations and conditions (Table 1), some state officials are envisioning new ways to use existing data, staff, and resources to incorporate oral health into them. States with adult Medicaid dental benefits may face fewer hurdles to incorporating oral health into health homes and other models, but even some states without dental benefits are making progress.

Integrating Oral Health Data into Health Homes

Using physical[31] and oral health data together can pose challenges for states. Medical and dental providers often use different coding systems, with medical providers using current procedural terminology (CPT) and dental providers using current dental terminology (CDT) codes, which can make it difficult for providers to understand the services patients receive outside of their realm. In fact, many dental providers do not use electronic health record systems, which can be a barrier to data sharing, albeit a surmountable one. In some federally qualified health centers (FQHCs) that co-locate physical and oral health services, there are separate physical and oral health records, but dental providers have access to medical records. In other instances, privacy concerns as well as technical barriers can stymie the sharing of patient information between oral and physical health providers. However, Medicaid health homes present opportunities to better integrate data, and state officials identified some adjustments to existing data tools that could help shed light on the interplay of physical and oral health and improve health for patients.

One important source of information about health home participants is the screening tool or health risk assessment that many health homes use to gauge participant needs as part of initial or follow-up evaluations. At least two states (**AL** and **MO**) already include questions about a participant's oral health, including questions such as when was the last time the person visited a dentist. Other states note that while their screening tools do not currently include questions related to oral health status or needs, they may be open to including such questions in the future.

While the interviewed states do not regularly produce and analyze oral health data for Medicaid health home participants, several indicated they could conduct such analyses within their existing data infrastructure. For example, officials in one state reported that while they do not regularly analyze dental data, they can easily obtain it. They currently work with their state data analytics division — which can see dental claims down to the zip code — to identify the factors driving the highest costs of their health home recipients. For example, they reported that approximately 2 percent of emergency department visits by health home participants were for oral pain. Identifying those cost drivers can help officials think holistically about beneficiaries' care. Integrating dental data at the zip code level could also help them identify individuals and populations at highest risk of unmet dental needs that turn into emergencies.

State officials also acknowledge that collecting data for data's sake is not helpful — there must be a concrete plan to translate data into action. Collecting and transparently sharing only the data that is most actionable for providers and stakeholders is **South Dakota's** strategy. The state's Department of Social Services uses a

data dashboard to track the effectiveness of the health home program.[32] Staff compared a matched sample before and after implementing the health home program and found that the program avoided $7 million in costs, after accounting for the cost of the program.[33] The dashboard does not currently include information on the oral health status of health home participants.

Another example of strategic data collection and use is **Washington State's** Predictive Risk Intelligence System (PRISM). This data system, which includes data on all Medicaid dental visits in the last 16 months, helps state program staff, managed care organizations (MCOs), and other users to identify patients' needs to inform care planning and care coordination for high-risk Medicaid beneficiaries.[34]

Some state Medicaid officials suggest that a federal requirement for Medicaid health homes to include an oral health quality measure would prompt states to address oral health more proactively for beneficiaries with chronic and high-cost conditions. "Encouragement from the feds would be helpful," noted a state official.

Ohio's Trailblazing Dental Episode of Care

States can catalyze change by requiring providers to participate in alternative payment models. For example, **Ohio** Medicaid's tooth extraction episode of care rewards providers based on cost and quality outcomes. Under this retrospective model, Medicaid pays providers on a fee-for-service basis for care related to extracting a patient's tooth. The Medicaid agency then looks back quarterly at providers' claims data and calculates the total cost of all the services within the episode of care, including X-rays, other tests, and follow-up visits. Providers receive summaries detailing the cost of their episodes of care and their performance on quality measures. As the model matures, providers who consistently provide high-quality care at lower costs will share in some of the savings, and consistently high-cost providers will share in the risk.[35]

The dental episode of care also plays a role in the state's approach to the opioid crisis. The state analyzed claims data and determined that more than one-third of patients prescribed opioids after a tooth extraction were at risk of developing opioid use disorder.[36] To address this issue, the state created opioid-related quality measures for providers as part of a number of episodes of care. That prescribing information can be the impetus for some providers to alter their prescribing behavior.

"Clinicians are scientists," observed one state official. "Showing them where they show up in the distribution is helpful, given the objectivity of the numbers. We're not dropping the hammer, but we're moving toward greater transparency."

Enhancing Oral Health Workforce Capacity

Officials from a range of states acknowledged that a shortage of dentists who accept Medicaid patients can be a barrier to integrating oral and physical health care in payment models for people with chronic or high-cost conditions. Reasons for this shortage can include low reimbursement rates compared to private insurance and perceived higher rates of failure to keep appointments, often due to an unmet social need.

Even in states with robust adult Medicaid dental benefits, finding a dentist can be challenging. Nationwide, fewer than four in ten dentists accept Medicaid.[37] "We hear from our health home coordinators that it's a challenge finding dentists taking Medicaid patients. There's a shortage of dental providers. There is a lot of unmet need," explained one state Medicaid official.

Surveying Oral Health Needs in Missouri

In late 2017, the **Missouri** Department of Health and Senior Services' Office of Dental Health surveyed developmental disabilities coordinators about the oral health needs of their clients.[41] Nearly 65 percent of 245 respondents reported assisting clients with dental issues once a month, and nearly 85 percent said their adult clients had fair or poor dental health, and most had limited access to dental care.

About 80 percent said providers' refusal to accept Medicaid clients was a barrier to clients receiving dental care. They also identified lack of access to specialty care, such as sedation and oral surgery, as barriers.

However, state policies can address these challenges. In some states, expanded-practice dental hygienists or other types of dental health professionals help address unmet oral health need. **South Dakota's** collaborative supervision guidelines allow dental hygienists to provide care without direct supervision in schools, nursing homes, community health centers, and mobile dental units.[38]

Other providers and staff can help, too. Support provided by members of health home care teams, such as care coordinators who accompany members to dental appointments, can help reduce the no-show rate, according to one state official. The **Missouri** Community Health Worker (CHW) Pilot for Primary Care Health Home project employs CHWs to work with people outside the clinical setting to address factors such as transportation or anxiety that hinder individuals from keeping appointments and improving their health.[39] In some cases, CHWs walk patients from a primary care appointment to a dental office to ensure they receive oral health care. These examples suggest that state policies addressing the factors contributing to no-shows may help dentists feel more comfortable accepting Medicaid clients — and may help improve clients' overall health.[40]

At least one state is working with external partners to explore the possibility of expanding dental provider capacity by establishing a multi-payer referral relationship between primary care and oral health providers. This approach would ensure that oral health providers who accept new Medicaid patients also receive referrals of new privately-insured patients. This effort could help integrate physical and oral health and spur more dentists to participate in Medicaid by ensuring that they also receive additional commercially-insured patients in their payer mix.

Leveraging Managed Care and Other Contracting Strategies

Some states are using the process of contracting with Medicaid MCOs or other providers or entities to encourage integration of oral health into care for people with chronic or high-cost conditions. States can require MCOs to include oral health in their care coordination and performance measurement activities and metrics. A **Missouri** official reports that requiring MCOs to maintain a certain level of network access may be partially responsible for an increase in dental providers participating in Medicaid in that state.

> "If we incorporate the coordination of dental care into their health homes and people become employed or are more stable socially because of that intervention, that could be an outcome."
>
> — State behavioral health official

Building care coordination into contracts with Medicaid dental vendors is another state strategy. **South Dakota** has begun to include care coordination as a pilot in its Medicaid dental vendor contracts, with care coordinators reaching out to beneficiaries who have not had a recent a dental visit. The state is encouraging dental plans to work with health homes to collaboratively implement care coordination.

One state official said that a possible strategy for working with MCOs would be to incorporate oral health into value-based purchasing, with performance measures tied to the number of dental visits, or other process or outcomes measures. Another state official noted that the Medicaid MCOs responsible for pediatric dental services are the ones driving efforts to integrate oral and physical health. Adult dental in the state is still provided on a fee-for-service basis.

Lessons from Oral Health Pilots and Initiatives

State policymakers interested in models of integrating oral health into physical health care for people with chronic and complex conditions may need to look no farther than their own states. Lessons from FQHCs, from geographically-limited oral health pilot projects, and from innovative payment models can inform statewide planning and strategy.

A number of state officials identified FQHCs as playing an important role in meeting the oral health needs of vulnerable populations. Many FQHCs include a co-located dental clinic. **Missouri** currently has 21 FQHCs that are part of their primary care health home initiative, and nearly all of them have dental clinics. Partnering with FQHCs could be a natural fit for states wanting to integrate oral health into their Medicaid health homes. In **South Dakota**, FQHCs with co-located oral health services have included oral health providers in the health home care team. "Because that relationship [with the FQHCs] already exists, we have seen success from the health homes that have integrated the oral health team as part of the overall health home team," observed one official. A **Texas** FQHC serving the homeless population heard early on about their patients' need for oral health services. The FQHC scaled up its oral health services over time, and now develops an oral health plan of care whenever a patient comes to the FQHC. In Missouri, a person who visits the emergency room for an oral health need during office hours can be diverted to an FQHC with a dental clinic.

In addition to FQHCs, other partners both within and outside state government can help meet the oral health

needs of health home participants. For instance, **Alabama** Medicaid worked with the Alabama Department of Public Health and the University of Alabama at Birmingham School of Dentistry to get health home members seen at clinics run by both entities. While partnerships with safety-net dental clinics cannot address all adult dental needs, Alabama's example shows that even a state without an adult dental benefit can integrate oral health care into Medicaid health homes.

In addition to cultivating partnerships, states are also piloting innovative alternative payment models that incorporate oral health. For example, **Washington State** will launch a three-county pilot to examine the link between oral health and overall health for pregnant women and people with diabetes. As part of the pilot, the state will offer enhanced case management and increase the rate and the frequency of its payments for periodontal disease treatments in order to entice more providers to provide those services to Medicaid beneficiaries. The pilot will be modeled after Access to Baby and Child Dentistry program, which connects Medicaid-eligible children to oral health care, and engages primary care providers in delivering some preventive oral health services.[42]

Where Can States Start?

When state officials were asked, "If you were required to integrate oral health into payment models for Medicaid beneficiaries with chronic or high-cost conditions, where would you start?" their responses ranged from the easily feasible to the more aspirational. Although what is feasible for one state may not be for another, most states found one or more of the following recommendations to be a sound starting place:

- **Run dental data** for health home members and share it with providers. One state without an adult dental benefit said that pulling dental providers' claims data for health home members would require little extra work for its state data analysis group, but it could yield important insights for providers. For example, if the dental claims data shows that patients with diabetes have periodontal disease but are not receiving regular care for it, the primary care providers could help link such patients to oral health care.

- **Include one or more oral health questions in the health home assessment tool**. States already use such tools to assess the clinical and social needs of health home members. Including a question about oral health status or needs could help states link participants to appropriate clinical care through a Medicaid-enrolled provider, a safety-net clinic, or an FQHC. It could also inform state oral health policy decisions, such as whether to provide certain Medicaid dental benefits for adults.

- **Include dental providers in value-based payment initiatives**. Communicating early and often with dental providers can help state officials cultivate providers' support for value-based payment models. Effective communication can also help state officials benefit from providers' expertise. "We can't do anything without the providers onboard," said one state Medicaid official.

- **Train health home coordinators about dental benefits, self-management, and referrals**. States can build on existing investments in the health home workforce by educating staff on the ways in which they can support beneficiaries in accessing dental services and taking care of their oral health. Such education can be incorporated into existing training and professional development activities.

- **Connect health home members to a range of dental providers**, including hygienists and others who could help beneficiaries follow a self-care regimen.

    - **Add dental providers to the community resource lists** provided to patients and health home coordinators.

- **Consider employing community health workers** to help with oral health patient education, connecting members to dental providers, and overcoming barriers to keeping appointments.

- **Leverage dental managed care contracting to ensure care coordination**. In their contracts with Medicaid MCOs, states can require MCOs to coordinate physical and oral health care. They can also require them to maintain robust oral health provider networks. The contracting process is a powerful tool for states with managed Medicaid dental care.

- **Consider national or state dental measures to assess progress.** State policymakers know that it is often easier to prioritize an issue when they are assessed on it. States could develop their own state-specific measures of oral health integration, or they could adopt one or more of the Healthy People 2020 objectives from the US Centers for Disease Control and Prevention.[43] States could consider taking chronic conditions, such as diabetes, into account when determining elevated caries risk, or when measuring oral health utilization and quality for adults with periodontitis, as part of the Dental Quality Alliance measures.[44]

These actions could help states build on these and other existing state innovations:

- **Missouri** uses innovative strategies such as community health worker outreach, dental resident engagement, placement of dental hygienists in primary care clinics, and emergency department diversion in its health home program. Such efforts help to prioritize oral health care for individuals with certain chronic or high-cost conditions.

- **Washington State** plans a 2019 pilot to explore the connection between periodontal care and health for pregnant women and people with diabetes. The program will pay providers an increased reimbursement rate for periodontal care and case management services, highlighting the two-way relationship between periodontal health and overall health.[45]

- States like **Alabama** and **Missouri** demonstrate opportunities to include oral health- specific questions in health assessments to capture oral health data across all health homes programs.

- **Ohio** uses a tooth extraction episode of care in efforts to curb the opioid epidemic.[46]

State health policymakers are grappling with tight budgets, high chronic disease burden, and an opioid crisis that continues unabated. However, they identified concrete, feasible steps states could take—if they are not already—to better integrate oral health care into health homes and other models for vulnerable people. State policymakers know that improving the oral health of Medicaid beneficiaries struggling with substance use disorder and chronic physical maladies has the potential to save states money, as well as change lives for the better.

Endnotes

1. "Links Between Oral and Overall Health, " Oral Health and Triple Aim Toolkit, National Academy for State Health Policy, accessed May 7, 2017, https://nashp.org/links-oral-overall-health/.

2. Jean P. Hall, Shawna Chapman, and Noelle K. Kurth, "Poor Oral Health as an Obstacle to Employment for Medicaid Beneficiaries with Disabilities," *Journal of Public Health Dentistry* 73, no. 1 (2012): https://doi.org/10.1111/j.1752-7325.2012.00359.x.; AHRQ Innovations Exchange: Innovations and Tools to Improve Quality and Reduce Disparities, "Free Oral Health Services Enhance Self-Esteem and Employability for Individuals Living With HIV/AIDS, the Homeless, and the Uninsured," Agency for Healthcare Research and Quality, accessed May 7, 2018, https://innovations.ahrq.gov/profiles/free-oral-health-services-enhance-self-esteem-and-employability-individuals-living-hivaids.

3. "Medicaid Adult Dental Benefits: An Overview," Center for Health Care Strategies, Inc., Factsheet, accessed May 7, 2018, https://www.chcs.org/media/Adult-Oral-Health-Fact-Sheet_011618.pdf.

4. "Medicaid Fee-for-Service (FFS) Reimbursement and Provider Participation for Dentists and Physicians in Every State," American Dental Association Health Policy Institute, Infographic, accessed May 7, 2018, https://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIgraphic_0417_1.

pdf?la=en.; "Dentist Participation in Medicaid," American Dental Association Health Policy Institute, Infographic, accessed May 7, 2018, http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIGraphic_0217_1.pdf?la=en.

5.   "Chronic Disease Prevention and Health Promotion," Centers for Disease Control and Prevention, accessed May 7, 2018, https://www.cdc.gov/chronicdisease/overview/#ref17; "Multiple Chronic Conditions Chartbook: 2010 Medical Expenditures Data," Agency for Healthcare Research and Quality, accessed May 7, 2018, https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/prevention-chronic-care/decision/mcc/mccchartbook.pdf.

6.   Kenneth E. Thorpe et al., "The United States Can Reduce Socioeconomic Disparities by Focusing on Chronic Diseases," Health Affairs, accessed May 7, 2018, DOI: 10.1377/hblog20170817.061561.; "What is the Impact of Chronic Disease on America?," Partnership to Fight Chronic Disease, Factsheet, accessed May 7, 2018, http://www.fightchronicdisease.org/sites/default/files/pfcd_blocks/PFCD_US.FactSheet_FINAL1%20%282%29.pdf.

7.   Jamie Ryan et al., "How High-Need Patients Experience Health Care in the United States: Findings from the 2016 Commonwealth Fund Survey of High-Need Patients," The Commonwealth Fund, accessed May 7, 2018, https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_issue_brief_2016_dec_1919_ryan_high_need_patient_experience_hnhc_survey_ib_v2.pdf; Lisa Clemans-Cope, John Holahan, and Rachel Garfield, "Medicaid Spending Growth Compared to Other Payers: A Look at the Evidence," Kaiser Family Foundation, accessed May 7, 2018, https://www.kff.org/report-section/medicaid-spending-growth-compared-to-other-payers-issue-brief/

8.   R. Constance Wiener et al., "Preventive Dental Care in Older Adults with Diabetes," *Journal of the American Dental Association* 147, no. 10 (2016): DOI: 10.1016/j.adaj.2016.03.022.

9.   "Oral Health and Well-Being in the United States" American Dental Association Health Policy Institute, Infographic, accessed May 7, 2018, https://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/US-Oral-Health-Well-Being.pdf?la=en.

10.   Organizations such as NASHP and the National Association of Medicaid Directors bring state leaders together to share experiences, learn from one another, and build on the efforts of their peers in other states.

11.   Ohio and other states, including Arkansas and Tennessee, developed episode-based payments as part of CMMI's State Innovation Model initiative. http://medicaid.ohio.gov/provider/PaymentInnovation/Episodes; http://healthtransformation.ohio.gov/Portals/0/SIM%20Episode%20FAQs%20%28with%20links%20added%29.pdf

12.   "Medicaid Health Homes: SPA Overview, " Centers for Medicare and Medicaid Services, accessed May 5, 2018, https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-home-information-resource-center/downloads/hh-spa-overview.pdf.; The Center for Medicare and Medicaid Innovation, "State Innovation Models Initiative: Model Test Awards Round Two," Centers for Medicare and Medicaid Services, accessed May 7, 2018, https://innovation.cms.gov/initiatives/State-Innovations-Model-Testing-Round-Two/.; The Center for Medicare and Medicaid Innovation, "State Innovation Models Initiative: Model Test Awards Round One," Centers for Medicare and Medicaid Services, accessed May 7, 2018, https://innovation.cms.gov/initiatives/state-innovations-model-testing/.; Ledia Tabor, "Money Talks: How SIM Round 1 States are Reducing Costs," National Academy for State Health Policy, September 29, 2015, https://nashp.org/money-talks-how-sim-round-1-states-are-reducing-costs/

13.   "Approved Medicaid Health Home State Plan Amendments," Centers for Medicare and Medicaid Services, Map, accessed May 7, 2018, https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-home-information-resource-center/downloads/hh-map.pdf.

14.   "Smoking and Oral Health in Dentate Adults aged 18-64," Centers for Disease Control and Prevention, accessed May 7, 2018, https://www.cdc.gov/nchs/products/databriefs/db85.htm.

15.   "Health Homes," Centers for Medicare and Medicaid Services, accessed May 7, 2018, https://www.medicaid.gov/medicaid/ltss/health-homes/index.html.

16.   "Guide to Medicaid Health Home Design and Implementation," Centers for Medicare and Medicaid Services, accessed May 7, 2018, https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/Health-Home-Information-Resource-Center/design-and-implementation/index.html

17.   American Dental Association Health Policy Institute, *Oral Health and Well-Being in the United States*.

18.   Susan Griffin et al., "Oral Health Needs Among Adults in the United States with Chronic Diseases," *The Journal of the American Dental Association* 140, no. 10 (2009):, May 7, 2018, DOI: https://doi.org/10.14219/jada.archive.2009.0050; Amy Brown, "Access to Oral Health Care During the Perinatal Period: A Policy Brief," National Maternal and Child Oral Health Resource Center, accessed May 7, 2018, https://www.mchoralhealth.org/PDFs/PerinatalBrief.pdf; Hajar Shekarchizadeh et al., "Oral Health of Drug Abusers," *Iranian Journal of Public Health* 42, no 9 (2013):, accessed May 7, 2018, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4453891/; American Dental Association Health Policy Institute, *Oral Health and Well-Being in the United States*.

19.   Thomas Wall and Marko Vujicic, "Emergency Department Use for Dental Conditions Continue to Increase," American Dental Association Health Policy Institute, accessed May 7, 2018, http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_0415_2.ashx.

20.   Kamyar Nasseh, Marko Vujicic, and Diane Romaine, "Diverting Emergency Department Dental Visits Could Save Maryland's Medicaid Program, $4 Million Per Year," American Dental Association Health Policy Institute, accessed May 7, 2018, http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1114_2.ashx.

21.   "Dental Care." Centers for Medicare and Medicaid Services, accessed May 7, 2018, https://www.medicaid.gov/medicaid/benefits/dental/index.html; Center for Medicaid and CHIP Services, "Essential Health Benefits in the Medicaid Program," Centers for Medicare and Medicaid Services , Letter to State Medicaid Directors, accessed May 7, 2018, https://www.medicaid.gov/Federal-Policy-Guidance/downloads/SMD-12-003.pdf.

22.   Center for Health Care Strategies, Inc., *Medicaid Adult Dental Benefits: An Overview*.

23.   According to 2014 data from the Medicaid/Medicare/CHIP State Dental Association: http://www.msdanationalprofile.com/. See also https://nashp.org/wp-content/uploads/2016/04/Managed-Care-Brief.pdf

24.   "Dental Care Health Professional Shortage Areas," Kaiser Family Foundation, accessed May 7, 2018, https://www.kff.org/other/state-indicator/dental-care-health-professional-shortage-areas-hpsas.

25.   All the above health homes are statewide. Vermont and Washington phased in implementation county by county.

26.   Unless otherwise noted, all health homes are intended for Medicaid beneficiaries who have at least two chronic conditions; at least one chronic condition and is at risk of another; or one serious and persistent mental health condition, as specified in Section 2703 of the ACA. The chronic conditions defined in statute include but are not limited to: a mental health condition, substance use disorder, asthma, diabetes, heart disease, and being overweight with a body mass index over 25. According to CMS, approval of other chronic conditions, such as HIV/AIDS, may be considered. Unless otherwise noted, all the above health homes include the following as qualifying conditions: mental health conditions, substance use disorders, asthma, diabetes, heart disease, and BMI over 25.

27. Extrapolated based on qualifying conditions

28. Source unless otherwise specified is CMS, "Medicaid Health Homes: An Overview," May 2017: https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-homes-technical-assistance/downloads/hh-overview-fact-sheet.pdf

29. Sources include CHCS, "Medicaid Adult Dental Benefits: An Overview," May 2017, http://www.chcs.org/media/Adult-Oral-Health-Fact-Sheet_051617_updated.pdf

30. "MO HealthNet Primary Care Health Home Initiative," Missouri Department of Social Services, accessed May 7, 2018, https://dss.mo.gov/mhd/cs/health-homes/.

31. The state officials and thought leaders who informed this paper acknowledge that oral health is part of overall health. The use of the term "physical health" throughout this paper is not meant to suggest that oral health exists apart from overall health.

32. "Health Home Data Dashboard," South Dakota Department of Social Services, accessed May 7, 2018, https://dss.sd.gov/healthhome/dashboard.aspx.

33. Ibid

34. "Recent Project at Research and Data Analysis," Washington State Department of Social and Health Services, accessed May 7, 2018, https://www.dshs.wa.gov/sesa/research-and-data-analysis/recent-projects-rda; David Mancuso, "Improving Service Delivery for High Need Medicaid Clients in Washington State Through Data Integration and Predictive Modeling," Washington State Department of Social and Health Services, Keynote, accessed May 7, 2018, http://www.dhcs.ca.gov/services/calendar/Documents/High_Utilizers_Mancuso2.pdf.

35. "Episode-Based Payment Model Frequently Asked Questions, Ohio Governor's Office of Health Transformation, accessed May 7, 2018, http://medicaid.ohio.gov/provider/PaymentInnovation/Episodes.

36. Ohio's State Innovation Model: Using Episodes of Care to Impact the Opioid Crisis (and Other Public Health Priorities), PowerPoint presented at NASHP's 30th Annual Health Policy Conference, accessed May 7, 2018, https://nashp.org/wp-content/uploads/2017/06/G-Moody.pdf

37. American Dental Association Health Policy Institute, *Medicaid Fee-for-Service (FFS) Reimbursement and Provider Participation for Dentists and Physicians in Every State.*; ," American Dental Association Health Policy Institute, *Dentist Participation in Medicaid.*

38. South Dakota Legislature, Administrative Rule 20: 43: 10:04, effective August 15, 2016, accessed May 7, 2018. http://sdlegislature.gov/Rules/DisplayRule.aspx?Rule=20:43:10:04

39. "MO HealthNet Pilot Project Adds New Community Support to Help Stabilize Outpatient Care and Reduce Need for Hospital Care," Missouri Department of Social Services, Press Release, accessed May 7, 2018, https://dss.mo.gov/press/150723-mohealthnet-project-stabilize-outpatient-care.htm.

40. The Smiles for Life oral health curriculum has a module for community health workers and other front-line health workers intended to help them address oral health in the communities they serve. Smiles for Life, "Front Line Health Worker Module," accessed July 10, 2018, http://www.smilesforlifeoralhealth.org/buildcontent.aspx?tut=555&pagekey=101625&cbreceipt=0

41. "Office of Dental Health Survey of Developmental Disabilities Services Staff -- Dental Health Issues," Missouri Department of Health and Senior Services, Survey, accessed May 7, 2018, https://www.surveymonkey.com/results/SM-TBDZ6JM28/.

42. "Results," Access to Baby and Child Dentistry, accessed May 7, 2018, http://abcd-dental.org/results/.

43. "Oral Health: Objectives," Healthy People 2020 U.S, accessed May 7, 2018, https://www.healthypeople.gov/2020/topics-objectives/topic/oral-health/objectives.

44. "Dental Quality Alliance User Guide for Adult Measures Calculated Using Administrative Claims Data, Dental Quality Alliance, accessed May 7, 2018, https://www.ada.org/~/media/ADA/Science%20and%20Research/Files/DQA_2018_Adult_Measures_User_Guide.pdf?la=en.

45. Stefano Corbella et al., "Effect of Periodontal Treatment on Glycemic Control of Patients with Diabetes: A Systematic Review and Meta-analysis," Journal of Diabetes Investigation 4, no. 5 (2013):, accessed May 7, 2018, https://onlinelibrary.wiley.com/doi/abs/10.1111/jdi.12088/.; Philip Preshaw et al., "Periodontitis and Diabetes: A Two-way Relationship," Diabetologia 55, no. 1, (2012):, accessed May 7, 2018, https://doi.org/10.1007/s00125-011-2342-y.

46. Moody, *Ohio's State Innovation Model: Using Episodes of Care to Impact the Opioid Crisis (and Other Public Health Priorities)*

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